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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,473	10/24/2001	Shaun Atchison		2311

26453 7590 01/18/2005

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805 THIRD AVENUE
NEW YORK, NY 10022

EXAMINER

OLSEN, KAJ K

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 01/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/000,473

Applicant(s)

ATCHISON ET AL.

Examiner

Kaj K Olsen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-31, 33-54, 56, 58, 60 and 61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29, 60 and 61 is/are allowed.
- 6) ☒ Claim(s) 30, 31, 33-36, 40-54 and 56 is/are rejected.
- 7) ☒ Claim(s) 37-39 and 58 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 30, 31, 33-36 and 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Moi et al (USP 5,938,906).

3. Moi discloses a cassette for holding an electrophoretic gel comprising first and second planar wall members (110, 210) and walls 240 and 250 that define a spacer means adapted to position the first and second wall member in opposed orientation so as to define between opposed inner faces of the wall members a gel-receiving space having open upper and lower ends and closed lateral sides. See fig. 2 and 3 and col. 3, lines 37-45. Moi further discloses a locking means including a plurality of male members (elements 171-174 of fig. 1-3 or the various lips of fig. 5A-5D) with complementary receiving members. This locking means can only effect locking when the opposed inner faces are a predetermined distance apart from each other. See col. 4, lines 15-25; see also the embodiments of fig. 6 and 7. That would read on applicants defined locking means. With respect to the “snap-fit”, see col. 3, lines 47-54; col. 4, lines 40-44; col. 5, lines 28-30; and claims 5 and 14. With respect to the cassette being utilized for vertical gel electrophoresis, that is only the intended use of the apparatus and the intended use need not be given further due consideration in determining patentability. With respect to the first

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and second planar walls being “vertical”, applicant has not defined any sense of direction so the walls of Moi can be construed as being “vertical”. Furthermore, the specified “vertical” would appear to concern only the preferred orientation of the cassette when it is being utilized. The intended use has not been given any further due consideration.

4. With respect to the shape of the protrusion, the spacing means of Moi includes space pieces that have protrusions 171-174 on them. A straight piece having a protrusion coming off in a transverse direction would read on “L-shaped” giving the claim language its broadest reasonable interpretation.

5. The use of the cassette of Moi as a vertical cassette is only the intended use of Moi and the intended use need not be given further due consideration in determining patentability.

6. With respect to the defined “primary” and “secondary” spacing elements, any number of the features of Moi (e.g. walls 120, 130, 240 and 250) would read on broadly defined spacing elements.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 30, 31, 33-36, 40-42, 54 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yetman (USP 4,919,784) in view of Moi. Yetman is being cited and relied on for the first time with this office action.

10. Yetman discloses a cassette for performing vertical electrophoresis comprising first and second vertical wall members (10, 12), and a spacer means 40 to keep the first and second wall members. See fig. 2 and 3 and col. 2, lines 32-43. Yetman does not explicitly disclose the presence of a locking means reading on the set forth "snap-fit" mechanism. However, the previously cited Moi teaches such a locking mechanism (see rejection above) and teaches that such a cassette is easier to work with and avoids horizontal and vertical movement of the plates from each other and the gel. See col. 2, lines 20-29 and col. 4, lines 15-25. It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the locking means of Moi for the cassette of Yetman in order to make a cassette that is easier to transport and avoids plate dislocation.

11. With respect to claim 54, the comb of Yetman would read on the term "removable plug" giving the claim language its broadest reasonable interpretation. Yetman does not disclose a cassette having wells that are not the same size as each other (Yetman appears to show evenly spaced and sized wells). However, one possessing ordinary skill in the art at the time the invention was being made would recognize that different types of samples would require

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different starting sample sizes. It would have been obvious to one of ordinary skill in the art at the time the invention was being made to make some of the wells larger (and consequently having some of the wells be smaller) in order to provide sufficient sample for detection of the electrophoretic bands.

12. With respect to method claim 56 (those limitations not covered above), see Yetman, col. 3, lines 19-27.

13. Claims 43-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moi (or Yetman in view of Moi) in view of WO '307.

14. With respect to the claims, Moi or Yetman in view of Moi set forth all the limitations of the claims, but did not set forth the plurality of ribs. WO '307 discloses in an alternate cassette that the addition of ribs 16 (with or without recesses 17) provide additional rigidity to the cassette when less rigid plastics are utilized. It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of WO '307 for the cassette of Moi in order to provide additional rigidity to the cassette.

15. Claims 43-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yetman and Moi as applied to claim 30 above, and further in view of Margolis (USP 5,288,465). Margolis is being cited and relied on for the first time with this office action.

16. The references set forth all the limitations of the claims, but did not set forth the plurality of ribs. Margolis teaches in an alternate vertical electrophoresis cassette that ribs 34 built into the cassette can be utilized to form the sample channels (thereby obviating the need for a separate comb). See col. 1, lines 29-36 and col. 2, lines 53-59. It would have been obvious to

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one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Margolis for the cassette of Yetman and Moi in order to obviate a need for a separate comb.

17. Claims 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moi or Yetman in view of Moi as applied to claim 30 above and in further view of Perez (USP 6,432,262 B1).

18. Moi (or Yetman in view of Moi) set forth all the limitations of the claims (see rejection above), but does not explicitly disclose the presence of a removable buffer chamber. Perez discloses in an alternate electrophoresis device that the use of an enclosure for gel cassettes where one end of the cassette can be mounted into a frame that is capable of holding buffer solution (paragraph bridging col. 2 and 3). This frame structure would read on the applicant's removable buffer chamber giving the claim language its broadest reasonable interpretation. Said frame allows the gel cassettes to be mounted for easy electrophoretic operations, and it would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Perez for the cassettes of Moi or Yetman in view of Moi in order to facilitate the performance of the electrophoretic experiments. Any number of the elements of the frame (e.g. element 22) would constitute a positioning means for the buffer chamber.

Allowable Subject Matter

19. Claims 29, 60 and 61 are allowed.

20. Claims 37-39 and 58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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21. The allowable subject matter of claims 29, 58, 60 and 61 has been previously identified and will not be reiterated here.

22. With respect to claim 37 (which claims 38 and 39 depend from), the examiner is withdrawing the previous rejection of this claim over Moi. Although elements 240 and 250 of Moi would read on the defined spacer means and primary spacer element of claims 35 and 36 (from which claim 37 depends), once these spacer elements are defined as having corresponding ridges and channels of the respective wall members (as claim 37 requires), this neither reads on Moi nor would it have been obvious to add said feature to Moi.

Response to Arguments

23. Applicant's arguments filed 8-13-2004 have been fully considered but they are not persuasive. Applicant urges that Moi is not directed to vertical electrophoresis. Although applicant is correct, this is irrelevant for the cassette claims because the intended use need not be given further due consideration in determining patentability of the claimed invention.

24. Applicant also continues to assert that Moi fails to read on the claimed snap-fit. Again it appear that applicant is relying on one particular embodiment, which relies on a friction fit while ignoring the numerous instances where Moi described a snap-fitting. See col. 3, lines 47-54; col. 4, lines 40-44; col. 5, lines 28-30; and claims 5 and 14. In each of these passages, Moi utilizes either the term "snap" or "snapping". These embodiments clearly read on the broadly claimed snap-fit.

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25. Applicant also urges that Moi does not provide the same degree of locking as that of the instant invention. This may be the case, but applicant has not claimed a degree of locking that reads free of the prior art of Moi.

26. The examiner withdrew the rejection with WO '307 as a primary teaching because WO '307 does not disclose the now claimed "snap-fit" of claim 30. Applicant's arguments concerning WO '307 as a primary teaching are thereby moot.

27. Applicant's arguments that neither Leffler nor Perez teach the claimed locking means is irrelevant to how those teachings are being utilized (i.e. the locking means is coming from the teaching of Moi). Moreover, Leffner is no longer being relied on.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (571) 272-1344. The examiner can normally be reached on Monday through Thursday from 5:30 A.M. to 3:00 P.M. and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen, can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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January 13, 2005



KAJ K. OLSEN
PRIMARY EXAMINER